CONTENTS OF VOLUME 415

August 1989

ALLEN T. Jeffrey A. Characteristics of a 5-hydroxytryptamine-sensitive adenylate cyclase in intact and intracellularly perfused squid axons. 1

ELLIOTT A.A. & ELLIOTT J.R. The role of inactivation in the effects of *n*-alkanols on the sodium current of cultured rat sensory neurones. 19

BYWATER R.A.R., CAMPBELL G., EDWARDS F.R., HIRST G.D.S. & O'SHEA J.E. The effects of vagal stimulation and applied acetylcholine on the sinus venosus of the toad. 35

CAMPBELL G.D., EDWARDS F.R., HIRST G.D.S. & O'SHEA J.E. Effects of vagal stimulation and applied acetylcholine on pacemaker potentials in the guinea-pig heart. 57

MAHAUT-SMITH M.P. & SCHLICHTER L.C. Ca^{2+}-activated K^+ channels in human B lymphocytes and rat thymocytes. 69

CHURCH J. & MCLENNAN H. Electrophysiological properties of rat CA1 pyramidal neurones *in vitro* modified by changes in extracellular bicarbonate. 85

MCLACHLAN Elspeth M. & MECKLER Robert L. Characteristics of synaptic input to three classes of sympathetic neurone in the coeliac ganglion of the guinea-pig. 109

EKSTRÖM J. & TOBIN G. Secretion of protein from salivary glands in the ferret in response to vasoactive intestinal peptide. 131

BENHAM C.D. Voltage-gated and agonist-mediated rises in intracellular Ca^{2+} in rat clonal pituitary cells (GH_3) held under voltage clamp. 143

CACHELIN A.B. & COLQUHOUN D. Desensitization of the acetylcholine receptor of frog end-plates measured in a Vaseline-gap voltage clamp. 159

MILEDI R. & PARKER I. Latencies of membrane currents evoked in *Xenopus* oocytes by receptor activation, inositol trisphosphate and calcium. 189

KAWA Kazuyoshi Electrophysiological properties of three types of granulocytes in circulating blood of the newt. 211

GILES W., NAKAJIMA T., ONO K. & SHIBATA E.F. Modulation of the delayed rectifier K^+ current by isoprenaline in bull-frog atrial myocytes. 233

DUCHATELLE-GOURDON Isabelle, HARTZELL H. Criss & LAGRUTTA Armando A. Modulation of the delayed rectifier potassium current in frog cardiomyocytes by β-adrenergic agonists and magnesium. 251

TAMURA K. & WOOD J.D. Electrical and synaptic properties of myenteric plexus neurones in the terminal large intestine of the guinea-pig. 275

GRANZIER H.L.M. & POLLACK G.H. Effect of active pre-shortening on isometric and isotonic performance of single frog muscle fibres. 299

MAYER Mark L., VYKLICKY JR Ladislav & WESTBROOK Gary L. Modulation of excitatory amino acid receptors by group IIB metal cations in cultured mouse hippocampal neurones. 329

MAYER Mark L. & VYKLICKY JR Ladislav The action of zinc on synaptic transmission and neuronal excitability in cultures of mouse hippocampus. 351

MASON W.T. & SIKDAR S.K. Characteristics of voltage-gated Ca^{2+} currents in ovine gonadotrophs. 367

MURPHY P.C. & SILLITO A.M. The binocular input to cells in the feline dorsal lateral geniculate nucleus (dLGN). 393

CHINET A. & GIOVANNINI P. Evidence by calorimetry for an activation of sodium–hydrogen exchange of young rat skeletal muscle in hypertonic media. 409

WALMSLEY Bruce Synaptic potentials evoked in cat dorsal spinocerebellar tract neurones by impulses in single group I muscle afferents. 423

ALLEN D.G., LEE J.A. & WESTERBLAD H. Intracellular calcium and tension during fatigue in isolated single muscle fibres from *Xenopus laevis*. 433

DI PRAMPERO Pietro E. & LAFORTUNA Claudio L. Breath-by-breath estimate of alveolar gas transfer variability in man at rest and during exercise. 459

JÄNIG W. & LISNEY S.J.W. Small diameter myelinated afferents produce vasodilatation but not plasma extravasation in rat skin. 477

MATSUMOTO Kazuo & PAPPANO Achilles J. Sodium-dependent membrane current induced by carbachol in single guinea-pig ventricular myocytes. 487

BERMAN M.F., CAMARDO J.S., ROBINSON R.B. & SIEGELBAUM S.A. Single sodium channels from canine ventricular myocytes: voltage dependence and relative rates of activation and inactivation. 503

CULL-CANDY Stuart G. & USOWICZ Maria M. Whole-cell current noise produced by excitatory and inhibitory amino acids in large cerebellar neurones of the rat. 533

CULL-CANDY Stuart G. & USOWICZ Maria M. On the multiple-conductance single channels activated by excitatory amino acids in large cerebellar neurones of the rat. 555

OCHOA José & TOREBJÖRK Erik Sensations evoked by intraneural microstimulation of C nociceptor fibres in human skin nerves. 583

HADLEY Robert W. & LEDERER W.J. Intramembrane charge movement in guinea-pig and rat ventricular myocytes. 601

BENNET M.R., DAVIES A.M. & EVERETT A.W. Erratum: *Journal of Physiology* 409 (1989) 625

KONISHI T. Erratum: *Journal of Physiology* 411 (1989) 626

PROCEEDINGS OF THE PHYSIOLOGICAL SOCIETY

6–7 *April* 1989

University College London & Middlesex School of Medicine Meeting

DEMONSTRATIONS

Allen D.G., Eisner D.A., Farquharson D., Lee J.A., O'Neill S.C. & Valdeolmillos M. Simple and inexpensive modifications of a fluorescence microscope for dual wavelength measurements on isolated single cells. 2P

Bradley Shirley A., Lyons Paul R. & Slater Clarke R. The epitrochleoanconeus muscle (ETA) of the mouse: a useful muscle for the study of motor innervation *in vitro*. 3P

Pichon C. & Pichon Y. A program for automatic analysis of action potentials in squid giant axons. 4P

Attwell David, Barbour Boris, Sarantis Monique & Szatkowski Marek The use of whole-cell patch-clamping to monitor glutamate uptake electrically, in glial cells isolated from the salamander and rabbit retina. 5P

Duchen Michael R. & Pearce Rosalyn J. A preparation of neurones freshly dissociated from mouse dorsal root ganglia for electrophysiological study. 6P

Baro Isabelle, Eisner D.A., Raimbach Sarah J. & Wray Susan The measurement of intracellular pH in single, isolated smooth muscle cells. 7P

Bolsover Stephen, Lamb Angela & Silver R. Angus A Digital Imaging Fluorescence Microscope to measure spatial gradients of calcium within growing growth cones of mouse neuroblastoma cells in culture. 8P

Burne Julia F. & Fulton Barbara P. Use of intracellular dye-injection techniques to study glial cell development and function in the isolated rat optic nerve. 9P

James C. Measurement of power output of the human quadriceps. 10P

Jones D.A. & Parker D.F. Development of a portable strain gauge to measure human muscle isometric strength. 11P

Carey M.P., Fry J.P., Jones A.T., Stephens D.B., West D.C. & White D.G. Pharmacological conditioning with anxiogenic agents in the pig. 12P

Hurley M.V. & Newham D.J. An apparatus for the study of human muscles under isometric and isokinetic conditions. 13P

Chapman B.J. & Speakman E.A. The measurement of the mean circulatory filling pressure and the compliance of the venous system in the anaesthetized rat. 14P

Cole J.D. Moving without proprioception; a video of a man with a large fibre sensory neuropathy below the neck. 15P

Holder D.S. Intracranial and extracranial impedance measurements in a model of stroke in the anaesthetized rat. 16P

Cotsell B., Foreman J., Lynn B., Shakhanbeh J. & Ye W. The use of an infra-red laser–Doppler flow meter to measure changes in skin blood flow in man and in anaesthetized rats. 17P

Burn A., Philip H.I. & Sedgwick E.M. A brain mapping programme for scalp-recorded evoked potentials in man. 18P

COMMUNICATIONS

Charnet P., Gurney A.M., Nargeot J. & Pye J.M. Intracellular calcium enhances calcium channel current in isolated frog atrial cells. 19P

Brown D.A., McFadzean I. & Milligan G. Antibodies to the GTP-binding protein G_o attenuate the inhibition of the calcium current by noradrenaline in mouse neuroblastoma × rat glioma (NG108-15) hybrid cells. 20P

Benham C.D., Evans M.L. & McBain C.J. Inhibition of Ca-ATPase slows recovery from voltage-gated Ca_i load in cultured neurones from rat dorsal root ganglia. 21P

Ivorra I., Miledi R. & Parker I. Discrimination of intra- and extracellular calcium sources during phosphoinositide signalling in *Xenopus* oocytes. 22P

Erulkar S.D. & Rendt J. Calcium currents recorded from single myometrial cells isolated from immature rat after injection of progesterone *in vivo*. 23*P*

Mahaut-Smith M.P., Rink T.J. & Sage S.O. Single channels in human platelets activated by ADP. 24*P*

Randriamampita C. & Trautmann A. Platelet-activating factor induces a biphasic increase of intracellular calcium in isolated mouse macrophages. 25*P*

Ashcroft Frances M., Gray D.E., Kelly R.P. & Sutton R. Voltage-activated calcium and potasium currents in human isolated pancreatic β-cells. 26*P*

Glavinovic M.I. Stoichastic nature of gating of Ca^{2+}-activated K^+ channels in isolated bovine chromaffin cells. 27*P*

Lederer W.J. & Nichols C.G. ADP and GDP modulate the ATP-sensitivity of K_{ATP} channels in isolated rat ventricular cell membranes. 28*P*

Davies N.W., Huang Yu, Nelson M.T., Quayle J.M. & Standen N.B. ATP-sensitive potassium channels recorded from isolated arterial smooth muscle cells of rabbit and rat. 29*P*

Ashford M.L.J., Hales C.N., Kozlowski R.Z. & Noble Ann L. Barbiturates inhibit ATP-sensitive potassium channels in a rat insulin secreting cell line. 30*P*

Ashford M.L.J., Boden P.R. & Treherne J.M. Glucose-induced excitation of rat hypothalamic neurones *in vitro* is mediated by ATP-sensitive K^+ channels. 31*P*

Kemp P.J. & Peers C. Pharmacological separation of whole-cell potassium currents in freshly isolated rat type II pneumocytes. 32*P*

Cohen P., Cottrell G.A. & Hill-Venning C. The protein phosphatase inhibitor okadaic acid potentiates the 5-HT induced suppression of a K current in the C1-neurone of *Helix aspersa*. 33*P*

Bendahhou S., Duclohier H. & Thoiron B. TTX-sensitive ionic channels from the squid giant axon reincorporated into planar lipid bilayers. 34*P*

Mulrine N. & Ogden D.C. Activation of ion channels at the rat endplate *in vitro* by acetylcholine at low and physiological temperatures. 35*P*

Inoue R. & Isenberg G. Receptor-operated inward currents of isolated guinea-pig ileal smooth muscle cells: G-proteins couple the mACh receptor to the non-specific cation channel. 36*P*

Garcia U., Grumbacher-Reinert S. & Nicholls J.G. Differences in localization of Na^+ and K^+ channels in the soma, axon and growth cones of identified leech neurones in culture. 37*P*

Cherubini E., Nistri A. & Ruiz de León O. Kainic depresses a persistent Ca^{2+} current of rat hippocampal neurones *in vitro*. 38*P*

Gibb Alasdair J. Characteristics of channel openings activated by low concentrations of glutamate in cells dissociated from adult rat hippocampus. 39*P*

Attwell David & Sarantis Monique The effect of glutamate on glial cells isolated from the rabbit retina. 40*P*

Everett Karen, Mobbs Peter & Thompson Richard The voltage- and transmitter-gated membrane currents of retinal ganglion cells isolated from the salamander retina. 41*P*

Uchimura N. Muscarine acts on M_1 receptors to reduce the inward rectifier potassium conductance in rat nucleus accumbens neurones *in vitro*. 42*P*

Cunningham J.R. & Neal M.J. Some bipolar cells in the retina of anaesthetized rabbit may use L-homocysteic acid as a transmitter. 43*P*

Cull-Candy S.G. & Herron C.E. Interaction of quinoxalinedione and glycine with the NMDA response in rat isolated cerebellar granule neurones. 44*P*

Cull-Candy S.G., Gallo V. & Usowicz Maria M. Ion channels activated by quisqualate and kainate in cultured cerebellar type-2 astrocytes of the rat. 45*P*

Murphy P.C., Salt T.E. & Sillito A.M. Contribution of both NMDA and non-NMDA receptors to transmission of the visual input to X and Y cells in the anaesthetized feline dorsal lateral geniculate nucleus (dLGN). 46*P*

Eaton S.A. & Salt T.E. Modulatory effects of serotonin on excitatory amino acid responses and sensory synaptic transmission in the ventrobasal thalamus of the anaesthetized rat. 47*P*

Duchen Michael R. $GABA_A$ responses of dissociated mouse neurones are attenuated by metabolic blockade. 48*P*

O'Connor V.M. Chemical modification of overlapping but conformationally distinct recognition sites for glycine and strychnine in isolated mouse spinal cord membranes. 49*P*

Biscoe T.J., Duchen M.R., Fry J.P. & Rickets C. Purification and actions of endogenous benzodiazepine-like immunoreactivity isolated from the brain of the mouse. 50*P*

Dickenson A.H., Magnuson D.S.K., Simonnet G. & Sullivan A.F. Spinal modulation of opioid actions by cholecystokinin and FLFQPQRFamide in the halothane-anaesthetized rat. 51*P*

Dickenson A.H. & Magnuson D.S.K. The actions of cholecystokinin, morphine and DSTBULET in the rat spinal cord *in vitro*. 52*P*

Calabresi P. & Lacey M.G. Nicotinic excitation of rat ventral tegmental neurones *in vitro*. 53*P*

Eyre J.A., Koh T.H.H.G., Miller S., O'Sullivan M.C. & Ramesh V. Constancy of somatosensory and motor central conduction times with age in man: Rushton's theory of nerve conduction revisited. 54*P*

Boniface S.J., Mills K.R. & Schubert M. Multimodal discharge latencies of human spinal motoneurones evoked by transcranial magnetic stimulation. 55*P*

Holder D.S. Changes in impedance during the action potential in isolated crab nerve: implications for applied potential tomography (APT) of neuronal discharge. 56*P*

Hammond G.R. & Murphy P.R. The effect of cutaneous afferent stimulation on gamma motoneurones during locomotion in high decerebrate cats. 57*P*

Kucera Jan & Walro Jon M. Transience of sensory and motor innervation in developing muscle spindles removed from anaesthetized rats. 58*P*

Ellaway P.H., Friedland C.L. & Webster R.A. Synchrony of gamma motoneurone discharge and monoamines in the spinal cord of the anaesthetized rat. 59*P*

Fellows S.J., Garms E. & Thilmann A.F. Transient and maintained phasic reflex components in spastic human subjects. 60*P*

Appenteng K. & Moore Jane A. Firing of elevator motoneurones in the anaesthetized rat to slow current ramps. 61*P*

Edwards F.R., Harrison P.J., Jack J.J.B. & Kullmann D.M. Mechanisms underlying the reduction of EPSPs by baclofen in lumbosacral motoneurones of the anaesthetized cat. 62*P*

Millar Julian & Williams Graham V. Changes in P_{O_2}-like voltammetric signals in the spinal cord of anaesthetized rat associated with local neuronal activity. 63*P*

Fitzgerald Maria, Molander Carl, Shortland Peter & Woolf Clifford J. The redistribution of hair follicle afferent projections in the decerebrate rat spinal cord dorsal horn following neonatal capsaicin treatment. 64*P*

Häbler H.-J., Jänig W. & Koltzenburg M. Activation of chemosensitive C-fibres by an acute inflammation of the urinary bladder of the anaesthetized cat. 65*P*

Gardner-Medwin A.R. & Rastegar K. The relation of alpha rhythm to sensory attention in man. 66*P*

Jones H.E. & Sillito A.M. The discrete group of non-length tuned cells in the dorsal lateral geniculate nucleus (dLGN) of the anaesthetized cat may be relay cells. 67*P*

Bing Z., Bouhassira D. & Le Bars D. Diffuse Noxious Inhibitory Controls (DNIC) in the anaesthetized rat: effects of ibotenic acid-induced lesions of the periaqueductal grey. 68*P*

Cliffer K.D., Le Bars D., Sorkin L., Villanueva L. & Willis W.D. Convergence of heterotopic nociceptive information onto medullary reticular formation (MRF) neurones in the anaesthetized monkey (*Macaca fascicularis*). 69*P*

Navarrete R. & Walton K.D. Calcium conductances trigger doublet firing in neonatal rat motoneurones *in vitro*. 70*P*

Grumbacher-Reinert Simone Local influence of substrate molecules in determining distinctive growth patterns of an identified leech neurone in culture. 71*P*

Benowitz L.I., Fitzgerald M., Reynolds M. & Woolf C.J. GAP-43 expression in the developing spinal cord and peripheral nervous system of the rat. 72*P*

Erulkar S.D., Kuffler D.P. & Stolz B. Diffusible factors from muscle fibres and nerve tubes that direct the regeneration of frog axons *in vivo* and *in vitro*. 73*P*

Bolsover Stephen, Gilbert Susan & Spector Ilan Opposite effects of cAMP and cGMP on shape and motility of neuroblastoma cells in culture. 74*P*

Karlsen H.E., Packard A. & Sand O. Cephalopods are definitely not deaf. 75*P*

Crawford A.C., Evans M.G. & Fettiplace R. Adaptation of transducer currents in isolated cochlear hair cells of the turtle. 76*P*

Krnjević K. & Walz W. Anoxic block of synaptic transmission and correlated pH changes in isolated slices of rat hippocampus show marked temperature dependence. 77*P*

Ben Ari Y. Effects of galanine and glibenclamide on the anoxic response of rat hippocampal neurones *in vitro*. 78*P*

Cunnane Thomas C. & Manchanda Rohit Time course of transmitter action at the sympathetic neuroeffector junction in the isolated mouse and guinea-pig vas deferens. 79*P*

Amédée T. & Large W.A. Ionic mechanisms which contribute to the noradrenaline-induced depolarization in isolated cells of the rabbit portal vein. 80*P*

Mann G.E., Pearson J.D. & Sheriff C-J. Transport of L-arginine in perfused cultures of bovine aortic endothelial cells. 81*P*

Jones R.O., Kirkman E. & Little R.A. Effects of propofol anaesthesia on the baroreflex and its modification by hindlimb ischaemia in the rat. 82*P*

Bradley D.J., Ghelarducci B., La Noce A., Paton J.F.R., Sebastiani L., Spyer K.M. & Sykes R.M. Cardiovascular actions are exerted by the uvula cortex through two distinct efferent pathways in the anaesthetized or decerebrate rabbit 83*P*

Li Kaiying, Ponte J., Ridding M. & Sadler C.L. Is dopamine needed to prevent carotid body adaptation to hypoxia in the anaesthetized rabbit? 84*P*

Corfield D.R., Hanafi Z., Webber S.E. & Widdicombe J.G. Clearance of ^{99m}Tc-DTPA from the tracheal lumen in anaesthetized sheep. 85*P*

Forsling Mary L. & Wells T. The κ-opioid influence on basal and osmotically stimulated AVP secretion in the conscious rat. 86*P*

Brown H., Cooper A.M., Corrall R.J.M., Halliwell M., Qamar M.I. & Read A.E. Increased postprandial portal blood flow in normal man is suppressed by a somatostatin derivative. 87*P*

Prydal J.I. The mucus content of the human tear film by optical determination of film thickness. 88*P*

Langman V.A. & Maloiy G.M.O. Passive obligatory heterothermy of the giraffe. 89*P*

Crossley Ian, Whalley Tim & Whitaker Michael ATP-S inhibits cortical granule exocytosis at fertilization in sea urchin eggs. 90*P*

Crossley Ian & Whitaker Michael GDP-β-S prevents exocytosis in sea urchin eggs at a step subsequent to the fertilization calcium transient. 91*P*

Petersen O.H., Potter B.V.L. & Wakui M. Inositol trisphosphorothioate evokes repetitive pulses of Ca^{2+}-activated Cl^- current mimicking the acetylcholine response in isolated mouse pancreatic acinar cells. 92*P*

Dunne M.J., Gallacher D.V., Petersen O.H. & Yule D.I. Na^+-dependent glucose-evoked depolarization and increase in $[Ca^{2+}]_i$ in the rat insulinoma cell line RINm5F. 93*P*

Francis L.P., Lennard R. & Singh J. Effect of magnesium on acetylcholine-evoked secretory responses and calcium mobilization in isolated rat pancreas. 94*P*

Bovell D.L., Elder H.Y., McEwan Jenkinson D. & Wilson S.M. K^+ ($^{86}Rb^+$) efflux from the isolated human sweat gland under Na^+-free conditions. 95*P*

McKie A.T., Naftalin R.J. & Powrie W. Mechanical aspects of faecal dehydration in rabbits. 96*P*

Marshall A.T., Prenton E. & Shiells R.A. Nicotinamide reverses and blocks the secretory action of cholera toxin on isolated rabbit ileum. 97*P*

Datta Harish, MacIntyre Iain & Zaidi Mone Inhibition by extracellular calcium of *in vitro* bone resorption by isolated rat osteoclasts. 98*P*

Dziegielewska K.M., Habgood M. & Saunders N.R. Species-specific blood–CSF transfer of albumin in anaesthetized immature fetal sheep. 99*P*

Carmichael D.J.S., Lightman S.L., Peart W.S. & Sutters M. Vasopressin reverses the 'low salt diuresis' with no effect on renal sodium excretion in man. 100*P*

Law R.O., Statham Fiona K. & Viney Susan C. The influence of Ca^{2+} on the volume-modulatory loss of K^+ from isolated rat renal papillary cells incubated in hyperosmotic media. 101*P*

Ashley C.C., Ishii N. & Simpson A.W.M. Intracellular pH (pH_i) is not altered by agents which promote contraction and relaxation in smooth muscle cells isolated from the ABRM of *Mytilus edulis*. 102*P*

Dupont J.-L. & Gaillard S. Regulation of intracellular pH in isolated rat cerebellar Purkinje cells in culture: evidence for HCO_3^-–Cl^- and Na^+–H^+ exchanges. 103*P*

Deitmer J.W. & Szatkowski M.S. Voltage-dependent regulation of intracellular pH is mediated by electrogenic Na^+–HCO_3^- cotransport in leech glial cells. 104*P*

Bauer C., Donoso P., Eisner D.A. & Smith G.L. The effects of metabolic blockade on intracellular pH in isolated ferret hearts. 105*P*

Fedida D. & Giles W.R. A phorbol ester increases the transient outward current in rabbit atrial myocytes. 106*P*

Chapman R.A. & Rodrigo Glenn C. The spontaneous repolarization of isolated guinea-pig myocytes, depolarized by perfusion with Ca- and Mg-free Tyrode, is due to the activation of an outward current. 107*P*

duBell William, Lakatta Edward G., Spurgeon Harold A. & Talo Antti Temporal relationship of transient increases in cytosolic Ca^{2+} and inward current in single rat ventricular myocytes. 108*P*

Boyett M.R., Capogrossi M.C., duBell W.H., Lakatta E.G. & Spurgeon H.A. Cytosolic Ca^{2+} modulation of the action potential in rat ventricular myocytes. 109*P*

Beuckelmann D.J., Pott L. & Wier W.G. Transient inward current and intracellular calcium concentration in guinea-pig ventricular myocytes. 110*P*

Miller D.J., Smith G.L. & Steele D.S. Taurine enhances sarcoplasmic reticulum function and myofilament calcium sensitivity in chemically skinned rat ventricular trabeculae. 111*P*

Burton K., Irving M. & Sleep J. The rate of force development in sarcomere length-clamped fibres isolated from rabbit muscle. 112*P*

Brenner B., Ferenczi M.A., Irving M., Simmons R.M. & Towns-Andrews E. Myosin cross-bridge movement observed by time-resolved X-ray diffraction in a single permeabilized fibre isolated from frog muscle. 113*P*

van den Berg C., Elzinga G. & Stienen G.J.M. Relation between ATPase-activity and force development of chemically skinned cardiac trabeculae of rat. 114*P*

Feldmeyer D., Melzer W., Pohl Barbara & Zöllner Petra Fast opening kinetics of the slow Ca channel of isolated frog skeletal muscle after conditioning activation. 115*P*

Curtin N.A. & Woledge R.C. Work and energy output during cyclic contractions of white muscle isolated from dogfish. 116*P*

Berquin Anne & Lebacq J. Labile heat production in isolated mouse soleus muscle. 117*P*

Edman K.A.P. & Lou Fang Changes in force and stiffness during fatigue of frog isolated muscle fibres. 118*P*

Lännergren J. & Westerblad H. Caffeine induces a marked tension increase in fatigued single fibres isolated from a mouse foot muscle. 119*P*

Allen D.G., Bolsover S.R., Lamb A., Lee J.A., Silver R.A. & Westerblad H. Gradients of intracellular calcium during fatigue in isolated single muscle fibres from *Xenopus laevis*. 120*P*

Hutter O.F., Karpati G. & Zubrzycka-Gaarn E.E. Dystrophin is anchored to the sarcolemma of isolated human and other mammalian skeletal muscle fibres. 121*P*

Peckham M. & White D.C.S. Mechanical responses of skinned flight muscle fibres from the dragonfly (*Aeshna juncea*). 122*P*

Goldspink G. & Scutt A. Stretch and isometric tension induce rapid changes in gene expression in adult rabbit skeletal muscle *in vivo*. 123*P*

Jones D.A., Parker D.F., Round J.M. & Sacco P. Muscle strength in girls during childhood and adolescence. 124*P*

Clayton Jones D.G., Cumming D.V.E., Dunn M.J., Lovegrove C.A., Pattison C.W. & Yacoub M.H. The use of autologous skeletal muscle for long-term counterpulsation in sheep. 125*P*

Cooke C.B. The apparent efficiency of running against a horizontal impeding force in children and adults. 126*P*

POSTER COMMUNICATIONS

Brain A.I.J. & Wali F.A. Inhibition of impulse conduction by electromagnetic induction in the frog isolated sciatic nerve–gastrocnemius muscle preparation. 127*P*

Woledge R.C. & Yin C. A comparison of the recovery heat following isometric and working contractions of isolated mouse soleus muscles. 128*P*

Benterbusch R. & Melzer W. Modification of Ca inward current components in isolated myotome cells of *Branchiostoma* by use of intracellular fast Ca buffers. 129*P*

Colomo F., Lombardi V., Menchetti G. & Piazzesi G. The recovery of isometric tension after steady lengthening in tetanized fibres isolated from frog muscle. 130*P*

POSTER COMMUNICATIONS

Bagni M.A., Cecchi G., Colomo F. & Poggesi C. Tetanic tension and stiffness of isolated frog muscle fibres at full filament overlap. 131*P*

Elzinga G., Stienen G.J.M. & Versteeg P.G.A. Effect of inorganic phosphate on length responses to changes in load in skinned rabbit psoas muscle. 132*P*

Dawson M.J., Fletcher E.S., Ingkanisorn S.S., Kmiecik J.A. & Roman B.B. ^{31}P and ^{1}H nuclear magnetic resonance spectroscopic studies of contracture-inducing agents in isolated frog skeletal muscle. 133*P*